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| 09/868,221 | 06/15/2001 | Richard J Titmuss | 36-1439 | 6037 |

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| EXAMINER |
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MANIWANG, JOSEPH R

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| ART UNIT | PAPER NUMBER |
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2144

DATE MAILED: 11/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|---------------------------------------|---------------------------------------|--|
| Office Action Summary | Application No. 09/868,221 | Applicant(s) TITMUSS ET AL. | |
| | Examiner Joseph R. Maniwang | Art Unit 2144 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 September 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7,9,10,15 and 17-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7,9,10,15 and 17-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 102

1. Claims 1-5, 9, 10, 15, and 17-20 are rejected under 35 U.S.C. 102(a) as being anticipated by Zhao et al. ("Flexible Network Support for Mobility", ACM/IEEE, Proceedings of the Mobile Computing and Networking (MobiCom), p. 145-156, Dallas, TX, Oct 1998), hereinafter referred to as Zhao.
2. Regarding claims 1, 9, 10, and 15, Zhao disclosed a method and system comprising sending a data stream from a correspondent host to a home agent located in the home network of a mobile terminal (see Abstract; section 2), the mobile terminal sending a request for the data stream to be transmitted by the correspondent host (see section 3.1) and the mobile terminal communicating with the home agent to transmit the network location of the mobile terminal to the home agent (see sections 5.3.1, 5.3.2); and forwarding the one or more data streams to the mobile terminal, wherein the mobile terminal sends to the home agent information about the type of networks to which the mobile terminal is currently connected, the available bandwidth for each type of network to which the mobile terminal is currently connected, and the mobile host's care-of address applicable for each type of network to which the mobile terminal is currently connected, the home agent selecting an appropriate network and its applicable care-of

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address based on the available bandwidth for each type of network to which the mobile terminal is currently connected (see sections 5.3.1-5.3.2 and 9; Figure 6, Figure 7, Figure 8).

3. Regarding claim 2, Zhao disclosed the method and system wherein in response to a change in the information about the current availability received by the home agent at least one of the data streams is forwarded by the home agent to a network cache, said at least one of the data streams being stored in the network cache until the home agent forwards said at least one of the data streams to the mobile terminal (see section 4.3).

4. Regarding claim 3, Zhao disclosed the method and system wherein the request sent by the mobile terminal to the correspondent host is sent via the home agent (see section 3.2).

5. Regarding claim 4, Zhao disclosed the method and system wherein all communication from the home agent to the mobile terminal is routed via a foreign agent, the foreign agent being located in a subnetwork to which the mobile terminal is connected (see section 2).

6. Regarding claim 5, Zhao disclosed the method and system wherein all communication from the mobile terminal to the home agent is routed via a foreign agent, the foreign agent being located in a subnetwork to which the mobile terminal is connected (see section 2).

7. Regarding claims 17-20, Zhao disclosed the method and system wherein the mobile host selects an appropriate network and its applicable care-of address by

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comparing the bandwidths of different types of networks to which the mobile host is selected (see section 5.1 and 9).

Claim Rejections - 35 USC § 103

8. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhao et al. ("Flexible Network Support for Mobility", ACM/IEEE, Proceedings of the Mobile Computing and Networking (MobiCom), p. 145-156, Dallas, TX, Oct 1998), hereinafter referred to as Zhao, and further in view of Kikinis (U.S. Pat. No. 6,553,410).
9. Zhao disclosed a method of transmitting data to a mobile client having multiple network connections. The invention utilized Mobile IP (see Abstract), where it was disclosed that a correspondent host could transmit data to a mobile terminal. The data was first intercepted by a home agent, which then forwarded it to a mobile terminal (see section 2). Zhao disclosed that a mobile device could request the data, such as in a web transfer (see section 3.1). The mobile terminal sent location updates to the home agent (see sections 5.3.1, 5.3.2). Based on such connectivity data, the home agent forwarded the requested data from the correspondent host to the mobile terminal (see section 2).
10. While disclosing the possibility of a home agent receiving a change in connectivity data, Zhao did not specifically disclose reducing content forwarded to a mobile terminal, wherein the reduction further comprises conversion of the data to a lower resolution.

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11. In a related art of network data communications, Kikinis disclosed a method and system for providing improved data transmission to computer connected to a network. In particular, Kikinis disclosed the invention in the context of portable (i.e., mobile) devices (see column 5, lines 36-49). Similar to the invention of Zhao, Kikinis disclosed that a mobile terminal could request web data over a network (see column 10, line 64 through column 11, line 11). A mobile terminal provided connectivity data to a proxy server, which in turn used the data to tailor content forwarded to the mobile terminal (see column 12, lines 11-26). The tailored data was in reduced form (see column 3, lines 8-18). Furthermore, the tailored data could be of lower resolution than the original (see column 8, lines 15-28; column 11, lines 22-28).

12. It would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Zhao and Kikinis to incorporate the provision of forwarding a reduced-content version of data to the mobile terminal, wherein the reduction comprised a conversion to the data to a lower resolution. The invention of Zhao related to the use of mobile terminals, which included light-weight, portable computers and laptops (see Abstract, Figure 9). With such devices, Kikinis recognized a problem of battery life (see column 2, lines 16-60). One of ordinary skill in the art then would have been motivated to consider the teachings of Kikinis as they proved advantageous when used with such portable devices, giving the added benefit of increased battery life and saved power (see column 5, lines 56-65).

Response to Arguments

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13. Applicant's arguments filed 09/05/06 have been fully considered but they are not persuasive.

14. Regarding claims 1-7 rejected under 35 U.S.C. 112, second paragraph, Examiner acknowledges Applicant's amendments in overcoming the rejections. The rejections have been withdrawn.

15. Regarding claim 9 rejected under 35 U.S.C. 101 as being directed to non-statutory subject matter, Examiner acknowledges Applicant's arguments. The rejection has been withdrawn.

16. Regarding claims 1-5, 9-10, 15, and 17-20 rejected under 35 U.S.C. 102(a) as being anticipated by Zhao et al. ("Flexible Network Support for Mobility", ACM/IEEE, Proceedings of the Mobile Computing and Networking (MobiCom), p. 145-156, Dallas, TX, Oct 1998), Applicant generally asserts that Zhao does not teach the claim limitation reciting "wherein the mobile terminal sends to the home agent information about the types of networks to which the mobile terminal is currently connected, the available bandwidth for each type of network to which the mobile terminal is currently connected, and the mobile host's care-of-address applicable for each type of network to which the mobile terminal is currently connected, the home agent selecting an appropriate network and its applicable care-of address based on the available bandwidth for each type of network to which the mobile terminal is currently connected" as recited in independent claim 1. Specifically, Applicant argues that Zhao is in contrast to the concept of the home agent selecting a network and its applicable care-of address based on the available bandwidth for each type of network to which the mobile terminal is

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connected. Examiner submits however that Zhao's reads upon this broad concept as claimed. Clearly, the home agent of Zhao receives both network (i.e., "interface") information and a care-of address from the mobile agent as claimed, as Zhao disclosed a mechanism "to control the selection of the most desirable network interfaces for both outgoing and incoming packets for different traffic flows" (see Abstract), using a binding that "specifies the mobile host's care-of address(es) that the home agent should use to forward packets belonging to the flow" (see section 5.3.1). In addition to this, Zhao disclosed "automatically selecting the most suitable interface to use for each flow according to the QoS specified" (see section 9). Zhao disclosed that QoS involved, as one of ordinary skill in the art would recognize, bandwidth considerations (see section 5.1). Selection of an interface based on requested QoS requirements would therefore also be based on bandwidth considerations. Zhao also disclosed providing "mobility-aware applications with an API to specify their QoS requirements instead of requiring them to bind flows explicitly to specific interfaces" (see section 9). Clearly, the ability of the mobility-aware applications (i.e., mobile terminals) to specify QoS requirements would include a provision to send the home agent information about the bandwidth of the networks it is connected to since QoS involved bandwidth considerations (see section 5.1). As such, the disclosure of Zhao allowing for interface selection to be based on a requested QoS reads on the broad concept of a home agent selecting a network and care-of address based on the available bandwidth for each network a mobile terminal is connected as claimed.

17. Regarding claims 6 and 7 rejected under 35 U.S.C. 103(a) as being unpatentable over Zhao in view of Kikinis (U.S. Pat. No. 6,553,410), Applicant applies the same argument presented regarding claim 1. Accordingly, Examiner maintains the position described above.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph R. Maniwang whose telephone number is (571) 272-3928. The examiner can normally be reached on Mon-Fri 8:00-4:30.

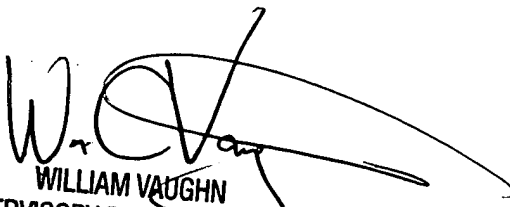
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William C. Vaughn can be reached on (571) 272-3922. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JM


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